

Supplementary Material

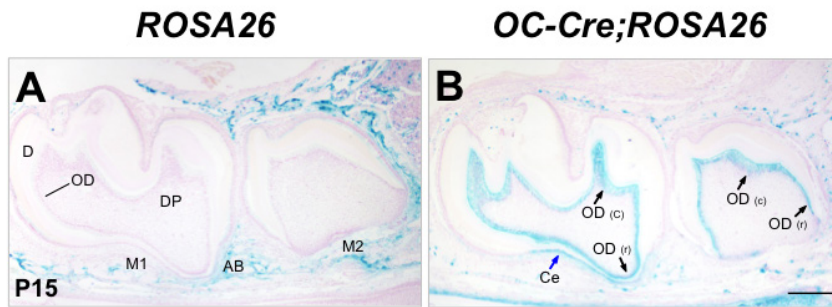


Figure S1: *LacZ* staining of the first and second mandible molars of *ROSA26* (A) and *OC-Cre;ROSA26* double-transgenic mice (B). The black arrowheads indicate the expression of the coronal and root odontoblasts and blue arrowhead indicates cementoblast expression. M1, the mandible first molar; M2, the mandible second molar; OD, odontoblast; D, dentin; DP, dental pulp; AB, alveolar bone. Scale bar: 1000 μ m.

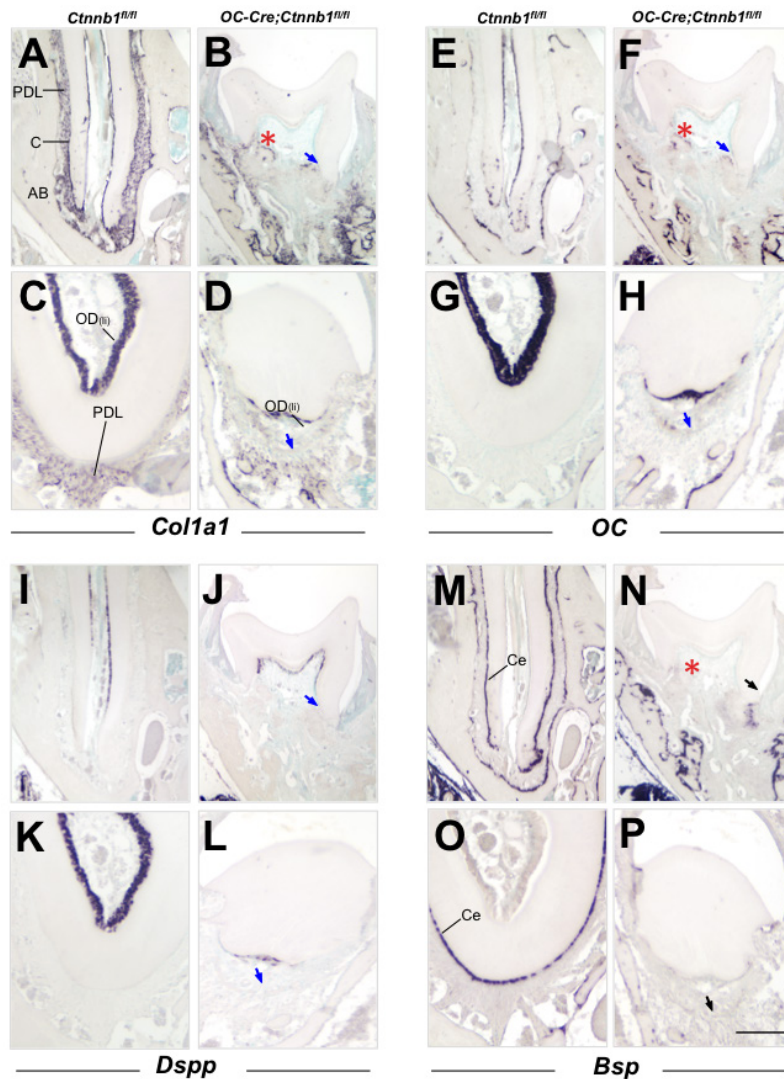


Figure S2: Ablation of β -catenin alters the expression of differential markers of odontoblasts and cementoblasts at P45. ISH analyses show the expression of *Colla1* (A–D), *OC* (E–H), *Dspp* (I–L), and *Bsp* (M–P) on sections of molars and incisors from P45 *Ctnnb1^{fl/fl}* and *OC-Cre;Ctnnb1^{fl/fl}* mice. Blue arrows indicate loss of signals for odontoblasts beneath the tooth crown and the lingual side of mutant incisors; black arrows in N and P indicate absence of cementoblast marker; red asterisks indicate calcified tissues in *OC-Cre;Ctnnb1^{fl/fl}* mice which express *Colla1*, *OC*, *Bsp*. PDL, periodontal ligament; Ce, cementoblast; AB, alveolar bone. Scale bar: 100 μ m (A, B, E, F, I, J, M and N), 50 μ m (C, D, G, H, K, L, O and P).

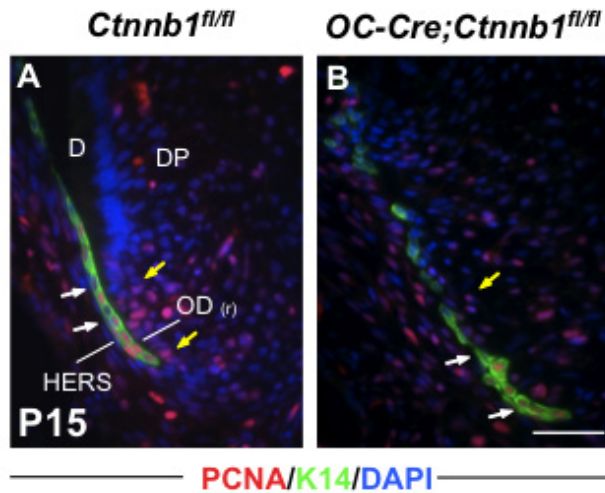


Figure S3: Disruption of β -catenin inhibits proliferation of odontoblasts. Immunofluorescence of PCNA (red) and K14 (green) in the mandible first molars of *Ctnnb1^{fl/fl}* (A) and *OC-Cre;Ctnnb1^{fl/fl}* (B) mice at P15. Yellow arrows indicate PCNA-positive cells in pre-odontoblasts of *OC-Cre;Ctnnb1^{fl/fl}* molars were decreased than that of the *Ctnnb1^{fl/fl}* molars. White arrows indicate HERS in *Ctnnb1^{fl/fl}* and *OC-Cre;Ctnnb1^{fl/fl}* molar roots. D, dentin; DP, dental pulp; OD(r), root odontoblast. Scale bar: 60 μ m (A and B).